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SEARCH FOR AN INVULNERABLE MISSILE

A great debate is raging in the Administration over the proposed \$25 billion mobile missile system. The President's decision may determine the Senate vote on SALT II.

By Richard Burt

In October 1977, a giant SS-19 intercontinental ballistic missile lifted off its launch pad at the Tyuratam rocket base in the southwestern Soviet Union and thundered its way eastward toward the Pacific Ocean. Only seconds into its flight, the ICBM's first and second stages dropped away, leaving its third stage — the "business end" of the weapon — to continue across central Asia. Somewhere over the Yellow Sea, the third stage began to execute a series of small but precise maneuvers. As it did so, six dummy nuclear warheads were ejected over the vicinity of their imaginary targets. The warheads plopped harmlessly into the ocean.

Although the entire test took less than 30 minutes, the Central Intelligence Agency and the Department of Defense spent the next several weeks pouring over its implications for the strategic balance. Drawing on data picked up by electronic listening posts in Turkey and Iran; spy ships stationed in the Pacific and reconnaissance satellites overhead, a team of American scientists, computer specialists and intelligence experts was able, by December, to report its findings in a top-secret memo to Adm. Stansfield Turner, the C.I.A. director, and Secretary of Defense Harold Brown.

The memo brought bad news. Couched in highly technical language, it informed the Government's top national-security aides that the Soviet Union's most prestigious military arm — the Strategic Rocket Corps — had made dramatic, and unexpected, progress in upgrading the accuracy of its most lethal missiles. Specifically, it said that the Soviet Union now possessed the ability to deliver thermonuclear weapons thousands of miles through space and bring them down within a few hundred yards of their predetermined targets. And if these targets happened to be the United States' 1,054 intercontinental missiles buried in underground silos in the American Middle West, this was close enough for the Soviet weapons to rupture the silos and destroy the missiles.

This finding abruptly ended a drawn-out and divisive debate in intelligence circles over when, if ever, Moscow would have the capacity to launch a "first-strike" attack against the American land-based nuclear deterrent. Now, a year and a half later, Mr. Carter's national-security aides acknowledge that this could happen as early as 1981, when the Soviet Union should have completed deploying some 500 SS-19 missiles and about 300 SS-18's (an even bigger ICBM that is equipped with 10 warheads). The Administration is torn over the question of what, if anything, the United States should do about the emerging Soviet missile threat.

The United States Air Force has offered its answer in the form of a major new weapons program it calls the "Missile Experimental," or MX. In effect, the Air Force's proposed missile system would offer a two-step solution to the vulnerability of the Minuteman ICBM force. Like the new generation of Russian ICBM blockbusters, the missile would be highly accurate and equipped with as many as 10 separate, independently targeted warheads, or MIRV's. This would give Washington the means to match Moscow in what defense analysts like to call "silo-busting" capability — the ability to launch pinpoint attacks against the opposing side's missile forces. But more important, unlike the existing Minuteman ICBM, the MX would not be housed in underground silos; in fact, it would be the nation's first mobile intercontinental missile.

Not surprisingly, the Air Force's MX proposal has not gone down very well in some quarters. With a price tag of at least \$25 billion, it has not been difficult for opponents of the mobile missile to find support from politicians who oppose such an investment in an era of fiscal austerity. Meanwhile, environmentalists are not cheered by the idea of having nuclear-armed missiles traveling around the countryside on trucks,

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flying around the skies or moving around a series of empty silos located on vast expanses of land. And even in defense circles, Pentagon technocrats have been battling tooth and nail over the MX concept, arguing over various approaches for mobile basing and disagreeing over the specific characteristics of the missile itself.

But these objections have recently paled before the wider political and strategic issues raised in the MX debate. The country has witnessed controversial defense debates before — the "missile gap" controversy during the 1960 Presidential election, the debate in the Senate over whether to deploy anti-ballistic missiles in 1969 and, much more recently, the howls of protest that met Jimmy Carter's decision to cancel a new nuclear bomber, the B-1.

But rarely has opinion been so deeply divided on basic questions of defense and national security. On one side, there is a growing constituency of Pentagon officials, members of Congress and private lobbyists, such as the Committee on the Present Danger, who voice growing distress over the Russian military buildup and what they see as the unwillingness of Mr. Carter to do anything about it. To this loosely knit coalition of hard-liners, the MX has become a symbol of American resolve: It is viewed as offering the United States its one and only shot of staying even — and maybe a little ahead — of the Russians in nuclear muscle over the next decade.

Against this, there is an equally influential and fervent school of thought that has taken to heart Mr. Carter's election promise of working toward "the elimination of nuclear weapons from the face of the earth." To the doves, the MX is a needless and particularly half-baked idea that is more likely to harm than enhance American security. Mr. Carter's position on the missile has thus emerged as a litmus test of his dedication to pursuing an end to the arms race.

But this rather theological debate has been brought down to the level of practical politics by the intensifying debate over a new American-Soviet strategic arms accord. The controversial arms treaty will go to the Senate next month, and, as things now stand, the White House lacks the 67 votes it will need to gain ratification. While the question of whether the United States could verify Russian compliance to the proposed treaty has dominated the arms debate so far, Congressional insiders believe that Mr. Carter's decision on the MX will be the crucial determinant of what the Senate does.

The Eisenhower Administration launched the United States on the road to acquiring intercontinental missiles, but it was concern over the existence of a "missile gap" fostered by the 1960 Presidential election that created the national consensus favoring a rapid expansion of strategic power. Thus, while the "missile gap" was quickly shown to be a myth after John F. Kennedy moved into the White House, the United States launched its most extensive military buildup since World War II. In addition to upgrading the Air Force's fleet of B-52 bombers, Mr. Kennedy approved multibillion-dollar programs for Polaris missile-launching submarines and for the ICBM known as the Minuteman.

Although the Minuteman ICBM's were deployed in concrete silos designed to cushion the shock of nuclear blasts, some of Defense Secretary Robert S. McNamara's aides worried that, in years ahead, new superaccurate Soviet missiles might still be able to pose a first-strike threat. (The concrete walls of the silos are about six feet thick, enough to protect a missile from a nuclear warhead that falls a half a mile or so away. A direct hit by a warhead or even a near miss, however, creates enormous pressures that no amount of concrete can withstand.) Accordingly, some of Mr. McNamara's aides suggested that the missiles might also be deployed on railway flatcars, but this scheme was judged to be impractical in the early 1960's.

The decision to forego a mobile Minuteman force left the United States with a three-pronged nuclear deterrent which today consists of 1,054 ICBM's in silos, 656 sea-launched ballistic missiles in 41 subs and about 300 of the intercontinental-range B-52's. In the late 1960's, this three-pronged strategic force (on land, sea and air) came to be known as the "triad." Some experts argued that the triad was needlessly redundant, pointing out that each of its three "legs" possessed more than enough nuclear firepower to devastate the Soviet Union. But secretaries of defense from Mr. McNamara on noted that each system possessed its special strengths and vulnerabilities and concluded that in the high-stakes game of nuclear deterrence, redundancy was not a luxury, it was vital.

Moscow's new ability to destroy Minuteman ICBM's in their silos, then, has not just fed the Pentagon's appetite for a new and less vulnerable missile. It has also forced Mr. Carter and his top advisers to re-examine the triad concept. To be sure, given the diversity of America's existing strategic arsenal, if Moscow ever attempted a paralyzing strike against the land-based "leg" of the triad, an American President could still rely on the B-52's and the missile submarines to deliver a massive counterblow. But Government nuclear planners worry that in the midst of a deepening East-West crisis Moscow might still be tempted to get in a sudden, "limited" nuclear strike against the vulnerable Minuteman force.

Consequently, Mr. Carter has been presented with three basic options. One is to adopt a "hair-trigger" strategy. Under this plan, Mr. Carter would simply leave the ICBM's unprotected in their holes and rely mostly on bombers and missile-launching subs to deter any Soviet attack. However, in the unlikely event that Moscow did try to destroy American land-based missiles, spy satellites could detect the impending attack and Mr. Carter could order the missiles to be launched before they could be hit. This strategy is the cheapest but, in the view of many, the most dangerous.

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A competing option calls for the United States to scrap land-based missiles and replace them with additional bombers and strategic submarines. Advocates of this school stress that while Soviet threats to these systems can be expected to grow, new technological developments will enable both bombers and subs to remain effective through the 1980's. However, critics of a so-called "air-and-sea strategic dyad" maintain that Moscow could achieve a means of neutralizing bombers and submarines in the years ahead.

Backers of the Air Force's MX insist that the United States should stay in the land-based missile business by deploying a weapon that could not be threatened by a pinpointed Russian attack. The way to do this, they assert, is to make the new missile a "moving target," complicating any first-strike attempt. While agreeing that the likelihood of an attack against the existing Minuteman force is small, the MX proponents argue that even a slight possibility of a surprise attack could weaken the nerve of a President during a severe confrontation with Moscow. And even short of crisis, MX supporters maintain that choosing one of the other options — continuing to rely on the existing and vulnerable missiles or phasing them out — would be the first step on the road to strategic inferiority.

In choosing among these options, Mr. Carter must also confront another difficult question. Does the United States need only to solve its own problem of missile vulnerability, or should it also pose a first-strike threat against Russian rockets? The preference of the Air Force and most Pentagon civilians is clear. They argue that by deploying mis-

siles like the SS-18 and SS-19, Moscow has changed the rules of the strategic game. The Soviet Union, they suggest, should be made to pay for threatening American ICBM's, by giving the MX a "silo-busting" capability like that of the Russian rockets. Accordingly, while the existing Minuteman III ICBM is able to deliver each of its three multiple warheads within about a quarter of a mile of its intended targets, the Air Force wants the MX to be able to hit 10 different targets in the Soviet Union with an accuracy of less than 500 feet. Only by threatening the survival of Soviet land-based missiles, the argument goes, is Mr. Carter going to have any luck in getting the Kremlin to cooperate in real arms control.

Officials at the State Department and the Arms Control and Disarmament Agency, as well as many academic specialists, maintain that any attempt to match Moscow's silo-busting capability with the MX would be a prescription for disaster. They note that a much larger fraction of Moscow's total nuclear arsenal is made up of land-based missiles and argue that a 10-warhead MX would be viewed by the Soviet military as an intolerable threat. Furthermore, if both Washington and Moscow achieved the ability to threaten the other's ICBM forces, the MX critics worry that nuclear war would become almost inevitable: In a situation of mutual vulnerability, the pressures driving each to try to shoot its missiles first could become unbearable during a crisis. To avert such a nightmare, some respected analysts, such as McGeorge Bundy, the national-security adviser to Presidents Kennedy and Johnson in the 1960's, have expressed support for the notion of building a mobile missile, but have counseled against deploying a block-buster like the MX.

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While senior officials and think-tank strategists have argued out the formidable policy issues connected with mobile missiles, Pentagon technocrats have had to grapple with the more prosaic, but equally daunting, job of figuring out how such a system would work. Since the Pentagon began to think in serious terms about a mobile ICBM early in this decade, nearly a hundred schemes for deploying the weapon have been examined and then thrown out. Some ideas, like putting the missile on giant, underwater tractors that would crawl along the bottoms of lakes, were abandoned on the grounds of cost or technical feasibility. Other less bizarre approaches, like loading the missiles on trucks that would roll up and down the nation's

Interstate System of highways, were seen as too controversial. The result is that the Pentagon's search for a technically feasible and politically acceptable basing system has been marked by disagreement, failure and, in several cases, bureaucratic bungling. "No one would compare the MX to the Manhattan Project," said one defense aide recently, referring to the superbly managed program during World War II to build the atomic bomb.

Three years ago, the Pentagon thought it had hit upon a basing solution when the Air Force proposed that the MX be placed in long, underground tunnels. Under this scheme, known as the "trench," the Air Force proposed to build about 250 tunnels on Government property in remote areas in the American Southwest. In each of the 11-mile tunnels, a single MX missile was to be placed on a flatcar which would be shuttled back and forth. By hiding the exact location of the flatcar, the Air Force argued that it could

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frustrate any Soviet first-strike threat. In the event of war, a portion of the tunnel's roof could be slid back and the missile could then be rapidly hoisted to a vertical position and fired. But senior defense scientists, asked by Harold Brown early last year to examine the "trench," concluded that it would not work, because any direct hit at any point along the roof of the tunnel could make the whole structure collapse, burying the MX and its flatcar launcher under tons of debris.

Although the scientists turned thumbs down on the "trench," they did find merit in another Air Force proposal for protecting the MX, known as the "multiple-protective-shelter" system. This scheme called for the construction, in effect, of a missile shell game. Each of the total force of 200 missiles would be rotated at random among as many as 20 to 25 different empty silos, or some 4,500 holes in all. Because at any one time Russian intelligence would not be able to determine which of the silos actually contained missiles, Moscow would have to attack them all if it wanted to defeat the system. And if the Soviet Union added additional warheads to its missile force to cover the entire network of silos, the United States could respond by merely building additional holes.

Over the last year, the shell-game concept has captured the support of many defense officials and most of the Pentagon's friends on Capitol Hill. The Air Force has produced a detailed plan for constructing the system, including the huge trucks that would be used to tote the missiles, each weighing up to 192,000 pounds, from hole to hole. Meanwhile,

budget aides have judged its total cost acceptable. "Technically sweet," is how one Air Force general describes the MX shell game.

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Harold Brown, a man who once earned his living by designing nuclear bombs, knows technology and is said by aides to be impressed by the Air Force proposal. But technology aside, the shell-game concept raises a host of problems that underscore the present-day difficulties of making major strategic decisions. Neither Mr. Brown nor his boss in the White House can afford to ignore these problems.

To begin with, the very idea of building a giant missile shell game — and turning a large chunk of the United States into a target for Soviet missiles — seems somewhat preposterous. Even Air Force officials admit that the weapon is a public-relations disaster. It was first called the "multiple-aim-point" system but this designation was quickly dropped when members of Congress recognized that the basing scheme was meant to provide thousands of different targets (or "aim points") for Soviet bombs. Similarly, after scaring several people out of their wits, Air Force briefing officers were banned from describing the basing system as a "sponge" used for "soaking up" enemy warheads.

Faced with opposition by farmers, environmentalists and local politicians, the Air Force quickly redesigned the system so that it could be deployed away from populated areas on a series of 25-square-mile sites located entirely on Federal property in remote, desert areas in the Southwest.

This has dampened public opposition, but it has not addressed the central question raised by the shell game — whether it would create major new problems in arms-control talks with Moscow. In the first accord limiting offensive missiles in 1972, President Nixon succeeded in halting the growing Soviet missile arsenal by getting Moscow to agree to a total ban on the construction of new silos. This provision has been carried over into the current negotiations and, not surprisingly, when Moscow learned of the Pentagon's plans for a missile shell game last summer, it insisted that it would be illegal under a new treaty. According to a top-secret cable sent by American negotiators in Geneva to Secretary of State Cyrus R. Vance in July, Vladimir Semyonov, then the chief Soviet negotiator, declared that building the MX shell game would be "tantamount to burying the agreement altogether."

Critics of the projected treaty, like Paul H. Nitze, the former arms negotiator who is now a member of the Committee on the Present Danger, point to Soviet opposition to the MX shell game to argue that the projected treaty should be rejected by the Senate. The Administration denies that the shell game would be illegal under a new arms accord. But in private, many officials responsible for arms control believe that the shell-game scheme could wreck future talks. The danger, as they see it, is that if the United States adopted a hide-and-seek basing scheme for the MX, the Soviet Union would be tempted to follow suit. If this occurred, the officials argue that it would be impossible to insure that Moscow was deploying only a few hundred missiles amid the thousands of new holes it had built. "It's very simple," said one State Department arms-control specialist. "If the Soviets went for a shell-game basing scheme, there would be no way of telling whether or not they had put a missile in every hole. In those circumstances, you could just wave goodbye to SALT."

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The Air Force, in response to these arguments, has recently come up with a complicated plan for monitoring missiles as they enter and leave specific deployment areas. But many officials remain skeptical. Accordingly, just as the Air Force believed it had finally resolved all the problems with the shell-game system, Mr. Carter ordered the service late last year to investigate yet another scheme for deploying the MX: putting it in the air on a new fleet of cargo planes that could take off and land on small airstrips around the country. After an exhaustive study of the system this winter, the Air Force informed Secretary Brown in March that the cost of developing, deploying and maintaining a fleet of missile-carrying planes could exceed \$40 billion.

Last month, White House and Pentagon officials, concerned that Mr. Carter would not approve the shell game concept, came up with two new alternatives. One was to modify the "trench" concept, to reduce its vulnerability and, at the same time, ease Moscow's monitoring tasks. The second, bolder alternative offered by the Pentagon called for scrapping the MX altogether in favor of a new submarine-launched rocket known as the Trident II. While this missile would mainly be deployed aboard the Navy's new class of Trident subs, its proponents suggested that it could also be deployed on land as well as on aircraft. Two weeks ago, Mr. Brown told Congressional leaders that the Administration had narrowed down its choices to the shell

game and these two new options.

Nobody familiar with the technology or the politics of the MX decision believes that Jimmy Carter faces an easy choice. He can give in to the Air Force and approve the mobile MX, hoping in the process that this does not deal a fatal blow to arms control. Or he can follow the advice of arms controllers and abandon the missile, leaving the country to depend on submarines and bombers to deter nuclear war in the years ahead. A third alternative is for Mr. Carter to defer making any choice, since whatever he decides will displease one camp or another. Given the complexity of this situation, it is not surprising that some White House aides hope Mr. Carter can delay a decision until after the Senate debate on the new SALT II treaty.

But a delay is unlikely. Congressional leaders are putting strong pressure on Mr. Carter to make up his mind as soon as possible. Their concern is echoed in the Pentagon, where officials point out that even if Mr. Carter goes ahead with the MX this year, it will still take 10 years to deploy the missile fully.

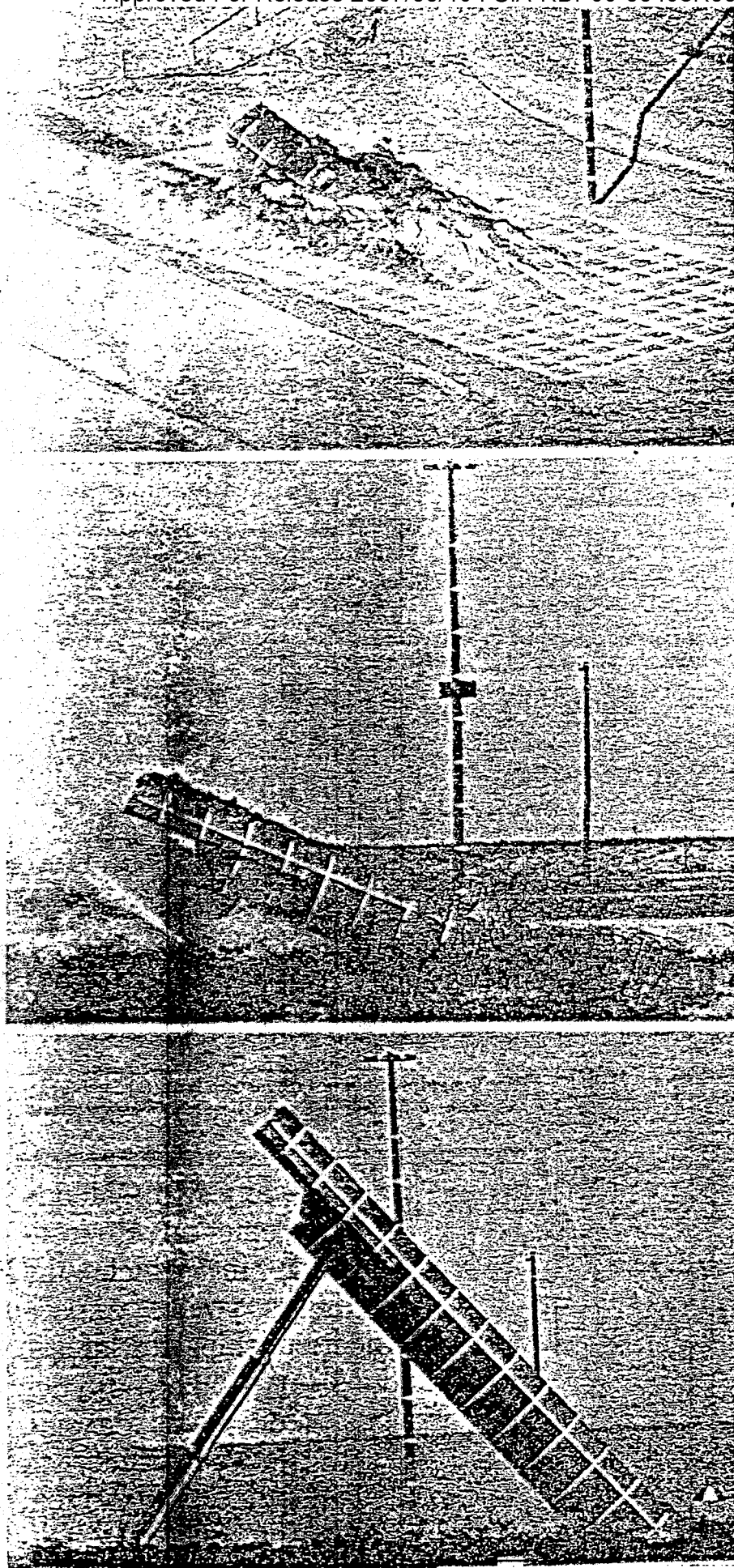
Many influential senators, such as Sam Nunn, the Georgia Democrat on the Armed Services Committee, argue that without a clear-cut expression of the White House's strategic plans, it will be difficult for them to vote in favor of the new arms treaty. Thus, the popular wisdom is that Mr. Carter must approve the MX if he is to gain Senate support for SALT II. But the politics of the MX decision were considerably complicated last month when three Senate liberals —

George McGovern, Mark O. Hatfield and William Proxmire — warned that if he approved the missile Mr. Carter would lose their votes on the treaty.

In a letter to the three, Mr. Carter recently pledged that his decision "would not be taken in the context of SALT." And there have been few Presidents better equipped to make such a key military decision. His background in military and nuclear matters, his passion for close analysis and his dedication to ending the arms race are well known. But which of these traits will he draw on in making the decision? Will it be Mr. Carter, the engineer, who finally determines that the "technically sweet" MX offers the only solution to a problem as immense as the vulnerability of the Minuteman ICBM? Or will it be Mr. Carter, the idealist, who decides that the world would be a better place without another nuclear missile? In making his decision, one of these Jimmy Carters will have to stand up. ■

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Testing the "trench": One plan for storing MX missiles is to place them on flatcars in long tunnels. In a launching test last August, a dummy missile in a tunnel punched through 10 inches of concrete and five feet of dirt to emerge. the "trench" is visible.